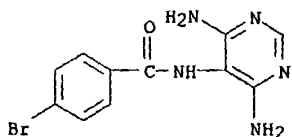


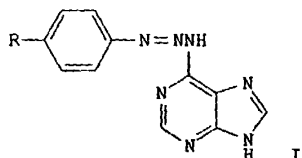
AB A method and compn. is disclosed for detg. the viability of tissue in a region of an organism having a vascular circulatory system that supplies blood to the region; the method includes: (1) dilating the above vascular circulation system by introducing adenosine or an adenosine agonist into the vascular circulation system to increase the blood flow into the region; (2) introducing a blood flow marking medium into the region; (3) alleviating the non-dilating effects of adenosine or the adenosine agonist by introducing an A1 adenosine receptor antagonist into the vascular circulatory system; and (4) detg. the amt. of marking medium in the region. The compns. of the invention include I [R1 = H, R2; R2 = endo-2-norbornyl, cyclopentyl; R3 = H, halo, amine, carboxy, C1-10 alkyl, etc.; R4 = benzyl, Ph, (O-substituted) C1-4 alkyl (e.g. ethers, alcs.); R5 = H, OH, sulfonate, halo, C1-6 (cyclo)alkoxy]. The method and compn. of the invention are useful in thallium-201 scintigraphy, and decrease side effects through alleviating the A1 effects of adenosine as an A1 antagonist while maintaining the A2 vasodilation activity of adenosine. Prepn. of selected I is included, and various I were assayed in A1 and A2 test systems.

L3 ANSWER 49 OF 70 CAPLUS COPYRIGHT 2003 ACS on STN  
AN 1981:406196 CAPLUS  
DN 95:6196  
TI Reactions of benzenediazonium ions with adenine and its derivatives  
AU Chin, Anton; Hung, Ming-Hong; Stock, Leon M.

CS Dep. Chem., Univ. Chicago, Chicago, IL, 60637, USA  
SO Journal of Organic Chemistry (1981), 46(11), 2203-7  
CODEN: JOCEAH; ISSN: 0022-3263  
DT Journal  
LA English  
IT 77071-06-8P  
RL: SPN (Synthetic preparation); PREP (Preparation)  
(prepn. of)  
RN 77071-06-8 CAPLUS  
CN Benamide, 4-bromo-N-(4,6-diamino-5-pyrimidinyl)- (9CI) (CA INDEX NAME)



GI



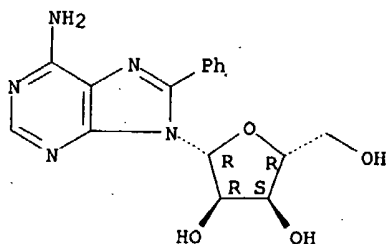
AB Adenine, adenosine and 5'-adenylic acid react readily with benzenediazonium ion and its derivs. at pH 8-11 to yield derivs. of (E)-6-(3-phenyl-2-triazen-1-yl)purine, e.g., I (R = H, Me, Br, SO<sub>3</sub>H). The triazenes decomp. in basic aq. soln. at 60-90.degree. to produce 8-aryladenines, apparently via intermol. processes. For adenosine and 5'-adenylic acid, the ribose residues are cleaved during this process. Both p-RC<sub>6</sub>H<sub>4</sub>N<sub>2</sub><sup>+</sup> and p-RC<sub>6</sub>H<sub>4</sub>.bul. can be intercepted during the reaction. Consequently, the phenylation reaction may be confidently formulated as an intermol. free-radical substitution.

L3 ANSWER 62 OF 147. CAPLUS COPYRIGHT 2003 ACS on STN  
 AN 1994:645130 CAPLUS  
 DN 121:245130  
 TI Selective Inhibition of Trypanosomal Glyceraldehyde-3-phosphate  
 Dehydrogenase by Protein Structure-Based Design: Toward New Drugs for the  
 Treatment of Sleeping Sickness  
 AU Verlinde, Christophe L. M. J.; Callens, Mia; Van Calenbergh, Serge; Van  
 Aerschot, Arthur; Herdewijn, Piet; Hannaert, Veronique; Michels, Paul A.  
 M.; Opperdoes, Fred R.; Hol, Wim G. J.  
 CS School of Medicine, University of Washington, Seattle, WA, 98195, USA  
 SO Journal of Medicinal Chemistry (1994), 37(21), 3605-13  
 DT Journal  
 LA English  
 IT 73340-78-0P, 8-Phenyladenosine 158555-06-7P  
 RL BAC (Biological activity or effector, except adverse); BSU (Biological  
 study; unclassified); PRP (Properties); SPN (Synthetic preparation); THU  
 (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES

(protein structure-based design of selective inhibition of  
 glyceraldehyde phosphate dehydrogenase complexes of humans and  
 Trypanosoma brucei in treatment of sleeping sickness)

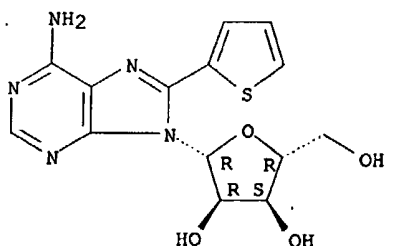
RN 73340-78-0 CAPLUS  
 CN Adenosine, 8-phenyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 158555-06-7 CAPLUS  
 CN Adenosine, 8-(2-thienyl)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



AB Within the framework of a project aimed at rational design of drugs  
 against diseases caused by trypanosomes and related hemoflagellate  
 parasites, selective inhibitors of trypanosomal glycolysis were designed,  
 synthesized, and tested. The design was based upon the crystallog. detd.  
 structures of the NAD:glyceraldehyde-3-phosphate dehydrogenase complexes  
 of humans and Trypanosoma brucei, the causative agent of sleeping  
 sickness. After one design cycle, using the adenosine part of the NAD  
 cofactor as a lead, the following encouraging results were obtained: (1) a  
 2-Me substitution, targeted at a small pocket near Val 36, improves  
 inhibition of the parasite enzyme 12.5-fold; (2) an 8-(thien-2-yl)  
 substitution, aimed at Leu 112 of the parasite enzyme, where the equiv.  
 residue in the mammalian enzyme is Val 100, results in a 167-fold better  
 inhibition of the trypanosomal enzyme, while the inhibition of the human  
 enzyme is improved only 13-fold; (3) exploitation of a "selectivity cleft"  
 created by a unique backbone conformation in the trypanosomal enzyme near  
 the adenosine ribose yields a considerable improvement in selectivity:  
 2'-deoxy-2'-(3-methoxybenzamido)adenosine e inhibits the human enzyme only  
 marginally but enhances inhibition of the parasite enzyme 45-fold when  
 The designed inhibitors are not only better